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The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows.

1. A process for separating protein and/or carbohydrate components from insoluble fiber-containing components of a
5 vegetable product which comprises the steps of:

(a) mixing said vegetable product with water to form a slurry;

10 (b) filtering the slurry by impeller filtration to form a predominately liquid filtrate and a moist solid residue; and

(c) removing water from the solid residue by a compression filtration means.

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2. The process of claim 1 wherein said step of impeller filtration comprises continuous filtration of the slurry by auger driven passage through a tubular filter.

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3. The process of claim 1 wherein said step of impeller filtration comprises periodic filtration of the slurry by impeller driven mixing in a vessel, a portion of which vessel is a filter medium, the impeller causing the slurry to be swept across the
25 filter medium to expel filtrate from the vessel.

4. The process of any of claims 1-3 wherein the step of compression filtration comprises continuous filtration by passing the solid residue between opposed filter belts which gradually

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and progressively compress the solid residue as the solid residue passes between them.

5. The process of any of claims 1 -3 wherein the step of
5 compression filtration comprises continuous filtration by passing
the solid residue through a screw press.

6. The process of any of claims 1- 3 wherein the step of
compression filtration comprises filtration of discrete portions of
10 the solid residue in compression filtration means comprising a
compression chamber which has a filter media bounding a
portion of the chamber by placing the solid residue in the
chamber and compressing the solid residue against said portion.

15 7. A process as claimed in any of claims 1-6 in which the
predominantly liquid filtrate also contains small particles of solid
high in protein and/or carbohydrate.

8. A process as claimed in any of claims 1-7 in which the
20 vegetable product is a defatted oilseed meal.

9. A process as claimed in any of claims 1-7 in which the
vegetable product is oil-extracted canola flake.

25 10. A process as claimed in any of claims 1-7, in which the
vegetable product is oil-extracted canola flake from a solvent-
based oil-extraction process.

30 11. A process as claimed in claim 10, in which the
predominantly liquid filtrate contains particles of cell meat.

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12. Separation apparatus for treating a solid product with water soluble components, which comprises in combination:

5 (a) means for mixing the product with water to form a slurry;

 (b) an impeller type filter to separate the slurry into a filtrate and a moist retentate; and

10 (c) compression filter means to remove further water from the moist retentate.

13. The apparatus of claim 12 wherein said impeller type filter comprises a tubular filter media housing an auger impeller closely fitting to the filter media.

15 14. The apparatus of claim 12 wherein said impeller type filter comprises a vessel including a filter media forming a portion of the vessel boundary and an impeller disposed for movement within the vessel closely fitting to said portion..

20 15. The apparatus of claim 12 or 13 wherein said filter media is a mesh.

25 16. The apparatus of any of claims 11-13 in which the filter media has apertures which permit passage of fine particles comprising at least one of protein and carbohydrate.

 17. The apparatus of any of claims 13-17, wherein said filter media has a minimum aperture of about 75 microns.

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18. The apparatus of any of claims 13-17, wherein said filter media has a minimum aperture of about 250 microns.
19. The apparatus of any of claims 13-17, wherein said filter media has a maximum aperture of about 2500 microns.
20. The apparatus of any of claims 13-17, wherein said filter media has a minimum aperture of about 250 microns.
- 10 21. The apparatus of any of claims 12-20, wherein said compression filter means comprises at least one pair of filter belts which are oriented so as to convey the solid residue while gradually and progressively compressing the solid residue in the direction of movement of the solid residue between the pair of filter belts.
- 15 22. The apparatus of any of claims 12-20 wherein the compression filter means comprises a screw press.
- 20 23. The apparatus of any of claims 12-20 wherein said compression filter means comprises a compression chamber, a portion of which is bounded by filter media and a piston adapted to be received within the compression chamber to compress solid residue within the compression chamber against the filter media.
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